OCCUPATIONAL HEALTH UNDER NATIONALIZED SYSTEMS OF MEDICAL CARE*

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I AM not going to praise British achievements in occupational health. On the contrary, I shall outline some of the major defects in our health services; defects which are not the result of a nationalized system of medical care but rather of a laissez-faire attitude towards the health of people at work. Occupational health services in Britain are not provided where they are most needed and in some industries the standards of service are much too low. In the main, there is not enough emphasis on preventive medicine in the work place.

I know little about occupational health services in the United States of America but I understand that you may have similar defects in your country. In socialist countries, like the U.S.S.R. and Yugoslavia, high priority is being given to the development of occupational health services because their national prosperity depends on a rapid process of industrialization in which the health of the work force is vital; in particular, vast numbers of peasants, ignorant of the hazards of industrial life, must be transformed into healthy, effective workers.

The six countries of the European Common Market, whose political ideologies are much the same as ours and which build on traditional social structures, have a clear-cut policy for developing health services at work. Will our national pride and our interest in humanity as democratic nations allow us to let these other countries go ahead in this new field of human welfare? Perhaps a more important question to ask is, "Can societies such as ours, whose increasing affluence depends on a high level of productivity, afford not to provide for better health care at work?"

* Presented at the meeting of the Section on Occupational Medicine with the New York State Society of Industrial Medicine, Inc., at The New York Academy of Medicine, October 23, 1963. This article appears simultaneously in the *Journal of Occupational Medicine*.

The British National Health Service

The British National Health Service aims to improve physical and mental health and to prevent, diagnose and treat illness. And whatever you may think of our Health Service, impartial observers and the public for whom it provides, believe that it has raised substantially the standards of medical care in Great Britain. No longer is a person denied treatment because he cannot pay. A few patients may still not get good treatment either through a local shortage of hospital beds or through lack of medical skill or humanity. Like other countries, we have our share of bad doctors, but shortages of facilities and skills are being met by more energetic building programs, better students and better medical education. I have had limited contacts with medical undergraduates at St. Thomas's Hospital in London and at Yale University in your country. If students in other medical schools have a similar quality of intellect and human interest in people there is no need for pessimism about the future of medicine, provided the organization of our medical care is such that it is possible to meet the needs of an affluent and highly industrialized society.

In the structure of our British National Health Service, I believe there are two weak points which prevent us from meeting such needs. First, since fee-paying—the traditional regulator of quality—has disappeared, something else will have to take its place, such as educated public opinion sought and encouraged by the medical profession.[1] There is a similar need for a system of quality control in occupational health, yet very seldom do management or plant physicians ask, "What do employees think of their occupational health service?" Indeed, such questions are seldom asked about any health service.

The second weak point in our National Health Service is that it does not yet fulfill its aims to promote health and prevent illness because it is not equipped to cope with the new threats to public health. I doubt if any health service in any country is coping adequately with the new problems of chronic disease, particularly mental illness and the degenerative diseases of middle and old age. The National Health Service has its attention focused on the treatment of acute diseases. It has neither the time nor the motivation to take any special interest in preventing chronic disease and the disability which so often accompanies it.

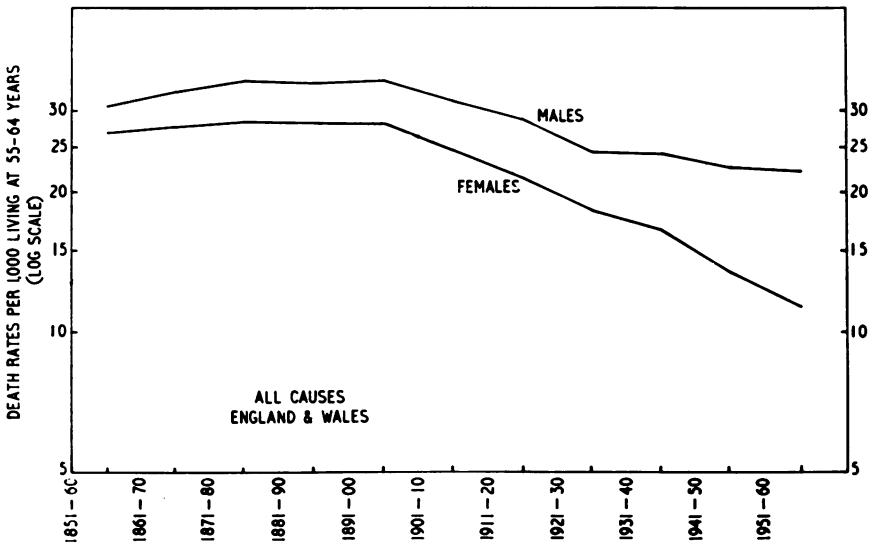

Fig. 1. Mortality from all causes in middle age in England and Wales during the last 100 years. From J. N. Morris, *Uses of Epidemiology*, Edinburgh, E. & S. Livingstone, 2nd ed., 1964. (In press.) Reproduced by permission.

Prevention of Chronic Disease

At the beginning of this century death rates in England and Wales of men and women aged 55 to 64 began to decline as a result of the sanitary reforms of the 19th century. They continued to do so for both sexes until the 1920's. Over the last 30 years female mortality has kept its downward trend, while male mortality has remained almost stationary (Figure 1).[2] The main responsibility for the difference between the sexes lies in the excessive number of male deaths from lung cancer and coronary heart disease. When these two diseases are excluded the mortality trend for men runs parallel to that for women (Figure 2). These diseases are threats to the public health of your country as well as ours, yet in neither are the health services equipped to deal with them by trying to identify and remove their causes, in the same way that our public health services in the past have controlled infectious diseases.

In an industrial urban society today there is a vast amount of disabling sickness. The insured population of 24 million workers in Great Britain loses more than 300 million days every year through sickness and injury; and, in spite of advances in medicine and surgery, this figure does not get any less, in fact, the amount of long-term

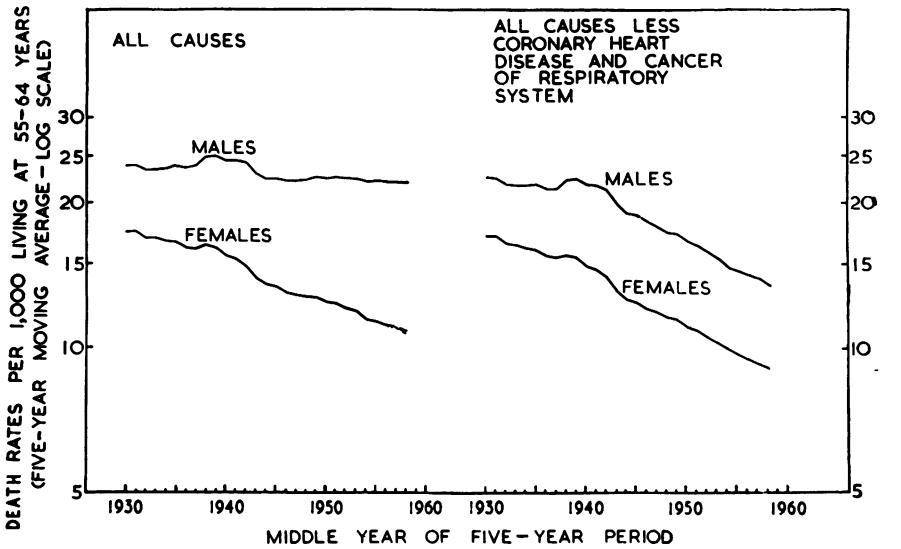

Fig. 2. Mortality in middle age, 1930-60, in England and Wales: the contribution of coronary heart disease and lung cancer. From J. N. Morris, *Uses of Epidemiology*, Edinburgh, E. & S. Livingstone, 2nd ed., 1964. (In press.) Reproduced by permission.

sickness is steadily rising among the older men (Table I).[2] Occupational health, with its aim of protecting and improving the health of all workers, should be very much concerned with this burden of sickness and with the prevention of premature death and disability of so many middle-aged men at their peak; indeed, in many respects occupational health services have more opportunity and more reason for trying to cope with these problems than do other services.

The most hopeful way at present of attacking the chronic diseases is first to detect early subclinical disease or to discover even earlier precursor disturbances when intervention can prevent the occurrence of disease altogether, and secondly, to identify susceptible groups of people who are particularly prone to disease and need special protection.[3]

There are opportunities for the occupational physician to apply these principles in respect of diseases such as bronchitis, lung cancer, neurotic illness and even coronary heart disease. For example, recent evidence suggests that the combination of a sedentary job, a high blood cholesterol and hypertension in a healthy middle-aged man makes him particularly liable to coronary heart disease. Is it possible to control or eliminate these adverse factors and prevent the disease? In the

TABLE I—PROPORTION OF ALL MEN IN BRITAIN AGED 61-63 WITH INCAPACITY FOR WORK LASTING OVER 3 MONTHS

Year	*Proportion Incapacitated*
	%
1951	8.0
1952	8.2
1953/4	9.0
1955	9.1
1956	9.4
1957	9.5
1958	9.6
1959	10.2
1960	10.6

At ages 58-60 there was a similar trend, but the increase was smaller. (Quoted by Professor J. N. Morris from Ministry of Pensions and National Insurance.)

United States, field trials on the prevention of coronary heart disease are now being undertaken by Stamler and his associates in Chicago and the New York anti-coronary club.[4] Their main object is to determine the ability of middle-aged men to reduce their obesity and serum cholesterol by dietary control and to assess the effects of such changes on the incidence of coronary heart disease. A plant physician, responsible for the health of a population of several thousand, also has an excellent opportunity to implement such mass field trials.

It is in the rehabilitation and resettlement of those disabled by chronic disease that the plant physician has most to offer at present by counselling, by rehabilitation at the place of work and by modifying work to reduce stress during convalescence. He can also prevent the over-loading of a worker whose skill or speed has been reduced by the effects of aging or disease.

BRITISH OCCUPATIONAL HEALTH SERVICES

Occupational Medicine

There are three main components of British occupational medical services. There are services provided voluntarily by the employer as he pleases and with no set standards. Secondly, there are the nationalized industries, such as coal, gas and electricity, which are required by their Acts of Nationalization to establish occupational health services. Thirdly, the Factory Inspectorate of the Ministry of Labour maintains

TABLE II—DISTRIBUTION OF CASES OF LEAD POISONING IN ELECTRIC STORAGE BATTERY FACTORIES IN GREAT BRITAIN: 1930-1961

	National Production	*Cases of Lead Poisoning*	
All factories	100%	100%	(370)
Group of factories with own health service	90%	6.5%	(24)
Other factories with statutory medical service	10%	93.5%	(346)

minimal standards of health, safety and welfare in certain types of work place by enforcing the Factories Act. Under the provisions of this Act the Appointed Factory Doctors examine young persons at entry and at yearly intervals; persons at risk in certain dangerous trades are also subjected to periodic medical examinations.

These services are not comprehensive and their standards vary greatly, firstly, because plant physicians and nurses are not necessarily required in industries where they are most needed nor do they have to have any special training in occupational health. Secondly, with notable exceptions, the services provided by the Appointed Factory Doctors do not comply with modern needs. They cater for limited groups of workers employed in certain dangerous trades and exercise medical surveillance by techniques which are out of date.

The Chloride Battery Company successfully controlled lead poisoning after it had set up its own health service. This factory and other large companies belonging to the Battery Manufacturers' Association together make about 90 per cent of the lead batteries produced in Great Britain. They have had their own medical services since 1930, using modern chemical and environmental measurements for the control of lead poisoning. In the 32 years between 1930 and 1961, these factories had 24 notified cases of lead poisoning. In the same period the remainder of the battery companies in Great Britain, small firms, dependent on the regulations and the statutory medical service provided by the Appointed Factory Doctors, which do not require either environmental or chemical tests, had 346 cases of lead poisoning notified (Table II). This comparison emphasizes the low standards of the statutory service.

I often wonder if it is possible for services run by the state to maintain their enterprise after the pioneering days are over. Initiative gets lost in the long and tortuous lines of communication between the periphery where things are done and the center where decisions on policy are made. Bright ideas may so often founder in the official channels that good men are not attracted to the executive posts, or those that are migrate to other jobs which offer less security but better salaries and more opportunities for enterprise.

Occupational Hygiene

There is still no adequate British occupational hygiene service, while in your country this subject has been established for half a century. In Britain there are not many occupational hygienists, and few of them have had advanced training beyond their preparation in a parent field, such as engineering, chemistry or physics. One university in Britain offers an academic course in occupational hygiene compared with at least seven universities in the United States. The most significant fact of all is that in the U.S.A. nearly all the state Departments of Health or Labor have industrial hygiene laboratories equipped to undertake investigations in industry. In Britain, the Factory Inspectorate has one pathology laboratory and one chemistry laboratory serving the needs of all the inspectors. At Slough, Newcastle and Manchester there are occupational hygiene services supported by funds from the Nuffield Foundation and by fees earned for service to industry. Occupational hygiene in England also compares unfavorably with that in the developing countries in Europe. Yet the quality, if not the quantity, of its occupational medicine is probably as good as that in other countries.

There are several possible reasons for this unbalanced development; the most important being that most of British industry, still content with the minimal standards of hygiene laid down in the Factories Act and other legislation, has not yet fully recognized that there is a need for measuring the working environment. A recent survey shows quite clearly that many industries with their own industrial medical services do recognize the need for an occupational hygiene service.[5] There must be many work places without industrial medical officers and too small to provide their own health services with similar needs not yet recognized. Like the development of occupational health services, occupational hygiene is left to voluntary effort. As things are at

present, the future of the services at Slough,* Newcastle and Manchester depends largely on the generosity of the Nuffield Foundation and eventually on their being able to pay their own way. It seems that it is essential to establish government occupational hygiene laboratories as you have done in your country.

The Future

Paradoxically, the comprehensiveness of the National Health Service is the reason given by the British Government for eschewing a policy of a more comprehensive development of occupational health services. It is proposed to continue in the same old way of encouraging the development of plant physician services on a voluntary basis, and attempting to maintain minimal standards of health, safety and welfare through the Factory Inspectors and Appointed Factory Doctors. In the socialist countries in Europe, particularly in Yugoslavia, Czechoslovakia and the U.S.S.R., it is possible by reconstruction, or construction where nothing existed before, to build up services based on new concepts of providing medical care. We cannot do this because to break down the traditional patterns of our health services, we would have to ignore the views of the majority and other democratic ideals which we cherish. Instead, we have to be content with compromise.

Let us consider a blueprint for occupational health prepared by the International Labour Conference in 1959,[6] which recommends that occupational health facilities should be extended to all workers and occupational health services should be set up for industrial, nonindustrial and agricultural undertakings and for public services. And, if this cannot be done, three priorities are given: (a) undertakings where health risks appear greatest; (b) undertakings where workers are exposed to special health hazards; and (c) undertakings which employ more than a prescribed minimum of workers. The physician should enjoy full professional and moral independence of both employers and workers. He should receive special training and be given the opportunity to improve his knowledge. The European Common Market countries—the nucleus of a United Europe—have accepted these recommendations[7] and decided, as a general principle, that the development of services must be based on statutory requirements and not left to

* This service has had to close down because it cannot pay for itself.

the voluntary efforts of employers. The first step is that undertakings with 200 or more workers have to be provided with occupational health services, these services should be under the control of full-time physicians, and the number of workers per physician should not exceed 2,500. They recommend special and continued training of the staff of occupational health services and compulsory training in a basic minimum of knowledge for all future doctors.

I see no reason why our two countries should not also follow the recommendations of the International Labour Conference. The organization and scope obviously depend on the health services available to the community as a whole. While in developing countries industry may provide a comprehensive service embracing the full range of therapeutic and preventive medicine, in our countries it is more restricted to preventive medicine and environmental hygiene to avoid overlap and competition with other services.

In the interests of the employee (the patient!) and the efficiency of industry, some provisions must be made at the work place for both medical care and environment hygiene. Neither the existence of a comprehensive health service outside the work place nor the self-interest of the medical profession should be allowed to inhibit the development of occupational health.

ACKNOWLEDGMENT

My thanks are due to Professor J. N. Morris for permitting me to reproduce the two figures.

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